CLAIMS

1. (Currently amended) A method of forming a product selected from at least one of a gel and[[/or]] a powder, the method comprising oxidatively treating ~~of a metallic oxide, metalloid oxide and/or a mixed oxide or resin thereof from one or more respective organometallic~~a liquid ~~precursor(s)~~ precursor ~~and/or organometalloid liquid precursor(s) by oxidatively treating said liquid~~ in at least one of a non-thermal equilibrium plasma discharge and[[/or]] an ionized gas stream resulting therefrom and collecting the resulting product, wherein the liquid precursor is selected from at least one organometallic liquid precursor, at least one organometalloid liquid precursor, and mixtures thereof.

2. (Currently amended) A method in accordance with claim 1 wherein the liquid precursor is transported through at least one of an atmospheric plasma discharge and[[/or]] an ionized gas stream resulting therefrom, by being dropped under gravity or entrained in a carrier gas.

3. (Currently amended) A method in accordance with claim 1 wherein the liquid precursor is treated with at least one of a non-thermal equilibrium plasma discharge and[[/or]] an ionized gas stream resulting therefrom, in a container.

4. (Currently amended) A method in accordance with ~~any preceding claim~~ claim 1 wherein the liquid precursor is introduced into the non-thermal equilibrium plasma in the form of an atomized liquid.

5. (Original) A method in accordance with claim 4 wherein the atomized liquid is introduced into the non-thermal equilibrium plasma by direct injection.

6. (Currently amended) A method in accordance with ~~any preceding claim~~ claim 1 wherein the non-thermal equilibrium plasma is an atmospheric plasma glow discharge.

7. (Currently amended) A method in accordance with ~~any of claims~~ claim 1 [[to 5]] wherein the non-thermal equilibrium plasma is selected from a continuous low pressure glow discharge plasma, a low pressure pulse plasma [[or]]and a dielectric barrier discharge.

8. (Currently amended) A method in accordance with ~~any preceding claim~~ claim 1 wherein the liquid precursor is at least one of an organometallic compound of titanium, zirconium, iron, aluminium, indium and tin. ~~or mixtures containing one or more thereof.~~

9. (Currently amended) A method in accordance with ~~any preceding claim~~ claim 1 ~~claim~~ wherein the liquid precursor is an organometalloid compound of germanium or silicon.

10. (Currently amended) A method in accordance with claim 9 wherein the silicon organometalloid compound is an organopolysiloxane having a viscosity of from 0.65 mPa.s. to 1000 mPa.s.

11. (Currently amended) A product selected from at least one of a~~A~~ metallic oxide, metalloid oxide, mixed oxide, ~~and/or~~ an organometallic resin and[[/or]] an organometalloid resin ~~thereof~~ obtainable in accordance with the method in ~~any preceding claim~~ claim 1.

12. (Currently amended) ~~A metallic oxide, metalloid oxide, mixed oxide and[[/or]] an organometallic and[[/or]] organometalloid resin thereof~~ The product in accordance with claim 11 wherein the product has a particle size [[is]] from ~~10nm~~10 nm to ~~250μm~~250 μm.

13. (Currently amended) An organometalloid resin in the form of an organosilicone resin in accordance with claim 11 [[or 12]] having the following empirical formula:[[-]]

$$(R'''_3SiO_{1/2})_w(R'''_2SiO_{2/2})_x(R'''SiO_{3/2})_p(SiO_{4/2})_z$$

where each R''' is independently an alkyl, alkenyl, aryl, H, OH, and wherein

$w + x + p + z=1$ and $w<0.9$, $x < 0.9$, $p + z > 0.1$.

14. (Currently amended) ~~An apparatus for making powders by the method of claim 1 to 10~~ The method according to claim 1 wherein the step of treating is carried out using an apparatus comprising a means for generating a non-thermal equilibrium plasma, a means of at least one of introducing and[[/or]] retaining liquid precursor, ~~characterised in that~~wherein the means of introducing the liquid precursor is an ~~atomiser~~atomizer.

15. (Currently amended) ~~An apparatus~~ The method in accordance with claim 14 wherein said apparatus is an atmospheric pressure glow discharge assembly wherein the atmospheric plasma is generated between spaced apart parallel electrodes which are ~~either~~ flat, parallel or concentric parallel electrodes.

16. (Currently amended) ~~An assembly~~The method in accordance with claim 14 comprising a pair of vertically arrayed, parallel spaced-apart planar electrodes with at least one dielectric plate between [[said]]the pair of electrodes, adjacent one electrode, the spacing between the dielectric plate and the other dielectric plate or electrode forming a plasma region.

17. (Currently amended) ~~An assembly~~The method in accordance with claim 16 wherein each electrode is in the form of a watertight box having a side

formed by a dielectric plate having bonded thereto on the interior of the box a planar electrode together with a liquid inlet adapted to spray water or an aqueous solution onto the face of the planar electrode.

18. (Cancelled)

19. A method in accordance with claim 9 wherein the silicon organometalloid compound is an organopolysiloxane having a viscosity of from 100 mPa.s to 1,000,000 mPa.s. dissolved in at least one of an organic solvent and[[/or]] an organosilicone solvent.